

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

COMMISSION ADVISORY  
AND COMPLIANCE DIVISION  
Energy Branch

RESOLUTION G-3184  
June 6, 1996

R E S O L U T I O N

RESOLUTION G-3184. SOUTHERN CALIFORNIA GAS COMPANY.  
REQUEST APPROVAL OF THE DANIEL MODEL 560 GAS  
CHROMATOGRAPH FOR HEATING VALUE MEASUREMENT PURPOSES.

BY LETTER FROM SOUTHERN CALIFORNIA GAS COMPANY DATED  
JANUARY 10, 1996.

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SUMMARY

1. By a letter dated January 10, 1996, Southern California Gas Company (SoCalGas), in conformance with General Order (G.O.) 58-B Section 5, requests approval of the Daniel Model 560 gas chromatograph for heating value (BTU) measurement purposes.
2. This Resolution approves SoCalGas' request.

BACKGROUND

1. In accordance with G.O. 58-B, Section 5.b SoCalGas conducted a three-month comparison test of the Daniel Model 560 gas chromatograph with an approved device such as the Daniel Model 500. The Daniel Model 500 was approved by CPUC Resolution G-2659 dated December 4, 1985.
2. The Daniel Model 560 utilizes the same hardware and software as the Daniel Model 500. The Model 560 differs from the Model 500 in that some features have been removed. Most notably, the analysis time is doubled from 6 to 12 minutes because of the removal of one of the column switching valves. The elimination of a stream switching valve driver board reduces the number of streams that can be analyzed from five to two. These changes allow for a lower cost unit without affecting accuracy.
3. The manufacturer (Daniel) recommends a weekly automatic calibration interval for chromatographs that utilize the model 2250 series controller used by SoCalGas. This complies with the requirements of G.O. 58-B, Section 8 - Calibration of Heating Value Measurement Devices. G.O. 58-B, Section 8 requires calibration at manufacturer recommended intervals. Daniel's specifications state that if the chromatograph is installed in an enclosure where the temperature does not fluctuate over 60

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degrees in a 24 hour period, Daniel states that the automatic calibration interval may be extended to one month.

4. The Daniel Models 500 and 560 are placed in enclosures where the temperature fluctuations do not exceed those specified by the manufacturer for the use of an automatic calibration interval of one month. Data submitted by SoCalGas shows that the mole percent of each component in the calibration gas changed less than .5% for both models.

5. SoCalGas initiated the three-month comparison test on June 22, 1994 through October 6, 1994 operating the Daniel Model 560 in parallel with the Daniel Model 500 while measuring the heating value of gas taken from the same source at the same time. A report with the test results was submitted with a letter dated January 10, 1996.

6. The average difference between the Daniel Model 500 and the Daniel Model 560 24-hour daily averages was .51 BTU, or .03% for nominal 1020 BTU gas.

#### DISCUSSION

1. The test results in the SoCalGas report demonstrate the reliability and accuracy of the Daniel Model 560 gas chromatograph. The 24 Hour Daily BTU Averages for the Daniel Model 560 and Daniel Model 500 were recorded and compared throughout the test. The test results show that the lower cost Daniel Model 560 was as accurate as the approved Daniel Model 500 gas chromatograph.

2. Based on the data presented, CACD finds the Daniel Model 560 as accurate as the previously approved Daniel Model 500 and will approve the Daniel Model 560 gas chromatograph for heating value measurement. CACD also finds an automatic calibration interval of one month reasonable and consistent with G.O. 58-B, Section 8.

#### FINDINGS

1. The Daniel Model 560 is similar in design to the Daniel Model 500 and the three-month test has shown the Model 560 to be as accurate as the Model 500.

2. A monthly automatic calibration interval is reasonable when the gas chromatograph is located in an enclosure, where the temperature does not fluctuate more than 60 degrees in a 24 hour period.

3. The Commission finds SoCalGas' request for approval of the Daniel Model 560 gas chromatograph to be reasonable.

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THEREFORE, IT IS ORDERED that:

1. SoCalGas is authorized to use the Daniel Model 560 gas chromatograph measurement system for heat value measurement purposes when used in compliance with the manufacturer's recommended operating procedures and Commission General Order 58..
2. SoCalGas is authorized to use a monthly automatic calibration interval.
3. This Resolution is effective today.

I hereby certify that this Resolution was adopted by the Public Utilities Commission at its regular meeting on June 6, 1996. The following Commissioners approved it:

  
WESLEY M. FRANKLIN  
Executive Director

P. GREGORY CONLON  
President  
JESSIE J. KNIGHT, Jr.  
HENRY M. DUQUE  
JOSIAH L. NEEPER  
Commissioners

Commissioner Daniel Wm. Fessler,  
being necessarily absent,  
did not participate.